Amendments to the Claims

This listing of claims will replace all prior versions, and listings of claims in the application.

Listing of Claims

Claims 1-19 – (canceled)

20. (currently amended): A method of recording record information onto information record medium, said information record medium comprising: an information record track formed on said information record medium, for recording said record information; and pre-information which includes address information indicating a position on said information record medium, recorded on said information record medium as an even pre-information or an odd pre-information in each at least one or more than one record information unit for record information, wherein said even pre-information and said odd pre-information are formed ~~recorded~~ by different patterns on a land track, and said record information including at least one or more than one record information unit recorded on a groove track,

said method comprising:

a detecting process of detecting said pre-information recorded on said information record medium;

a generating process of generating said record information which includes a synchronization signal added to each record information unit in correspondence with said detected pre-information; and

a recording process of recording said generated record information including said synchronization signal from predetermined position to said pre-information onto said information record track.

21. (previously presented) A method according to claim 20, wherein

in said recording process, said synchronization signal in said record information is recorded to a position adjacent to said pre-information.

22. (previously presented): A method according to claim 20, wherein

said record information unit is a synchronization frame,

said pre-information is recorded for each pre-information unit doubled said synchronization frame, and

said method further comprises a determining process of determining an address where said record information is to be recorded based on said pre-information.

23. (previously presented): A method according to claim 20, wherein

said pre-information includes synchronization pre-information and data pre-information, and

said synchronization pre-information corresponds to a head portion of a sector including a plurality of said record information units.

24. (previously presented): A method according to claim 20, wherein

said pre-information is recorded to a guide track for guiding a light beam, which records said record information, to said information record track, and

said pre-information is detected by a light beam emitted so that a center thereof is located on a center of said information record track.

25. (currently amended): An information recording apparatus of recording record information onto information record medium, said information record medium comprising: an information record track formed on said information record medium, for recording said record information; and pre-information which includes address information indicating a position on said information record medium, recorded on said information record medium as an even pre-information or an odd pre-information in each of at least one record information unit for record information, wherein said even pre-information and said odd pre-information are formed ~~recorded~~ by different patterns on a land track, and said record information including at least one or more than one record information unit recorded on a groove track,

said information record apparatus comprising:

a device which detects said pre-information recorded on said information record medium;

a generating device which generates said record information which includes a synchronization signal added to each record information unit in correspondence with said detected pre-information; and

a recording device which records said generated record information including said synchronization signal from predetermined position to said pre-information onto said information record track.

26. (previously presented): An information recording apparatus according to claim 25, wherein

said recording device records said synchronization signal in said record information to a position adjacent to said pre-information.

27. (previously presented): An information recording apparatus according to claim 25, wherein

said record information unit is a synchronization frame,

said pre-information is recorded for each pre-information unit doubled said one synchronization frame,

said apparatus further comprises a determining device which determines an address where said record information is to be recorded based on said pre-information.

28. (previously presented): An information recording apparatus according to claim 25, wherein

said pre-information includes synchronization pre-information and data pre-information, and

said synchronization pre-information corresponds to a head portion of a sector including a plurality of record information units.

29. (previously presented) An information recording apparatus according to claim 25, wherein

said pre-information is recorded to a guide track for guiding a light beam, which records said record information, to said information record track, and

said pre-information is detected by a light beam emitted so that a center thereof is located on a center of said information record track.

30. (currently amended): An information record medium, on which record information is able to be recorded, comprising:

an information record track formed on said information record medium, for recording record information;

and pre-information which includes address information indicating a position on said information record medium, recorded on said information record medium as an even pre-information or an odd pre-information in each at least one synchronization frame for record information,

wherein said even pre-information and said odd pre-information are formed ~~recorded~~ by different patterns on a land track, and said record information including at least one record information unit recorded on a groove track;

said even pre-information is located according to even number synchronization frame in said synchronization frame;

said odd pre-information is located according to odd number synchronization frame in said synchronization frame;

even number synchronization frames and odd number synchronization frames are located alternatively;

one recording sector comprises 26 synchronization frames; [[and]]

one error correcting code block comprises 16 recording sectors; and

record information including said synchronization signal is recorded from predetermined position to said pre-information.

31. (previously presented): An information record medium according to claim 30, wherein, said even pre-information and said odd pre-information are recorded on offset positions to the information record track.

32. (new): An information record media, according to claim 30, wherein said record information unit is recorded so that said synchronization signal included in said record information unit adjacent to top position of said pre-information in a radial direction.

33. (new): A method according to claim 20, wherein said record information unit is recorded so that said synchronization signal included in said record information unit adjacent to top position of said pre-information in a radial direction.

34. (new): An information recording apparatus according to claim 25, wherein said record information unit is recorded so that said synchronization signal included in said record information unit adjacent to top position of said pre-information in a radial direction.